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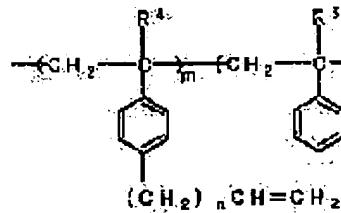
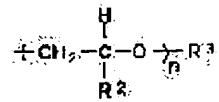
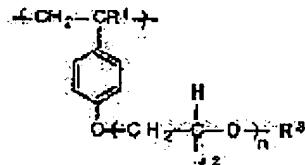
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(54) BLOCK-GRAFT COPOLYMER AND SELF-CROSSLINKING SOLID POLYELECTROLYTE PRODUCED BY USING THE SAME AND PRODUCTION OF THE POLYELECTROLYTE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a block-graft copolymer useful for a self-crosslinking solid polyelectrolyte adapted for electric cells, the polyelectrolyte being inexpensive, apart from swelling and dissolving in each kind of electrolytes, excellent in liquid-retainability and mechanical strength.

SOLUTION: This copolymer is obtained by including (A) a block chain of a polymer having a polymerization degree of ≥ 10 , the chain comprising the repeating unit of formula I (R^1 is H, etc.; R^3 is an alkyl, etc.; n is 1 to 100; and a number average molecular weight of the graft chain of formula II is 45 to 4400) and (B) a block chain of a polymer having a polymerization degree of ≥ 30 , the chain comprising the repeating unit of formula III (R^4 and R^5 are each H, etc.; n is 2 or 3; $(l+m)$ is ≥ 300 ; $(l:m)$ is (95 to 5):(50 to 50); and (l) and (m) are subjected to random or alternate sequence) in the A:B ratio of (1 to 30):(30 to 1). The objective copolymer is ≥ 300 in polymerization degree and useful for filmy polymer batteries, etc.



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